

REMARKS

Claim Amendments

Claims 1-6 have been amended herein. Claims 1 to 4 have been amended to read "An isolated or recombinant nucleotide sequence..." or "An isolated protein...". Support for these amendments can be found throughout the specification. Additionally, Claims 2, 4 and 6 have been amended as suggested by the Examiner. No new matter has been added.

Claims 5 and 7-9 have been cancelled herein.

New Claims 10 and 11 have been added herein. New claim 10 which specifies that the nucleotide sequence of claim 1 has the nucleotide sequence of SEQ ID NO: 1 has been added. This claim finds support in the application as filed, namely in Figure 1. New claim 11 which specifies a method for treating neoplastic disorders has been added. This claim finds support in the application as filed, namely on page 5, lines 7 to 15 (e.g. inhibition of the RTB1 gene for the treatment of neoplastic disorders) and on page 7, lines 1 to 5 (e.g. demonstration of overexpression of the RTB1 gene in cancer cells). No new matter has been added.

Substitute Sequence Listing

The Substitute Sequence Listing submitted herewith has been amended to specify the origin of the SEQ ID NO: 1 and 2. Namely, subheadings <213> of SEQ ID NO: 1 and 2 of the new sequence listing have been amended to read "Homo sapiens". Applicant respectfully submits that this amendment is supported by the application as filed and that no new subject matter has been introduced by this amendment.

Election/Restriction

Applicant affirms the telephonic election of Group I (claims 1 to 6) without traverse. Applicant reserves his rights for filing one or more divisional applications on the subject matter of the cancelled claims.

Priority

The specification has been amended to include a cross-reference to related applications. Applicant thus respectfully submits that the present application is entitled to the benefit of an

earlier filing date under 35 U.S.C. § 119(e). Reconsideration and withdrawal of the rejection are respectfully requested.

Specification

The abstract has been placed on a separate sheet. Applicant respectfully submits that the present application complies with 37 CFR § 1.52(b)(4). Reconsideration and withdrawal of the rejection are respectfully requested.

Claim Objections

Claims 2, 4 and 6 have been amended as per the Examiner's suggestions. Reconsideration and withdrawal of the rejection are respectfully requested.

Rejection of Claims 1-4 Under 35 U.S.C. 101

Claims 1 to 4 have been rejected under 35 U.S.C. §101. Accordingly, claims 1 to 4 have been amended to read "An isolated or recombinant nucleotide sequence..." or "An isolated protein...". Applicant respectfully submits that the claims, as presently amended, are distinct from naturally occurring products and do comply with 35 U.S.C. § 101. Reconsideration and withdrawal of the rejection are respectfully requested.

Rejection of Claims 1, 2, 4, 5 and 6 Under 35 U.S.C. 112, First Paragraph

Claims 1, 2, 5 and 6 have been rejected under 35 U.S.C. § 112 first paragraph. In response, Applicant has amended claim 1 to read: "...encoding a protein having the amino acid sequence as set forth in SEQ ID NO: 2". This amendment is clearly supported by the application as filed, namely in Figure 1. Applicant further submits that, a person skilled in the art, at the time of filing and in light of the teaching of the present description, would have contemplated various nucleotide sequences (other than SEQ ID NO: 1) capable of encoding the protein sequence shown in Figure 1.

For consistency, claim 3 has been amended to read "...having the amino acid sequence as set forth in SEQ ID NO: 2".

The limitation “use of a gene according to claim 1 as a promoter for overexpressing a gene in a suitable tissue” found in claims 5 and 6 as been considered allegedly not supported by the as-filed specification. Accordingly, Applicant has cancelled claim 5 and has amended claim 6 to read “A method for increasing the transcription of a gene”. Such amendment is supported by the specification as filed on page 7, lines 12 to 17 and in the paragraph bridging pages 7 and 8, where a fusion protein comprising a RTB1 moiety has been used to increase the transcription of a gene (e.g. a reporter gene such as the β -galactosidase gene or luciferase gene). Applicant also submits that, a person skilled in the art, at the time of filing and in light of the teaching of the present description, would have contemplated using a nucleotide sequence encoding a protein having the amino acid sequence set forth in SEQ ID NO: 2 to increase the transcription of various genes.

Claims 1, 2, 4, 5 and 6 have been rejected under 35 U.S.C. § 112 first paragraph. Applicant has further amended claims 2 and 4 to specify the human origin of the nucleotide sequence and of the protein. This amendment finds support in the application as filed, namely in Figure 1 and in the specification on page 4, lines 26 to 27. The new sequence listing has also been amended to specify the human origin of the sequences disclosed therein. In addition, Applicant respectfully submits that a scientific paper by Cho et al. published after the filing date of the present application (reference C9 of PTO-1449 form initialized by the Examiner on July 10, 2004, a copy of which is enclosed), confirms that the nucleotide and amino acid sequence set forth in Figure 1 and in the sequence listing of the present application is of human origin. By using a yeast two-hybrid system, Cho et al. has screened a human cDNA library (p. 3479, column 2, under the subheading cDNA library testing) for polypeptides capable of binding to the human RPA32 polypeptide (p. 3479, column 1, under the subheading Plasmids). Cho et al. subsequently cloned and sequenced the human RTB1 gene (refer to Figure 1A on page 3481, column 1). The nucleotide and amino acid sequence shown in Figure 1 of the present application (SEQ ID NO: 1 and 2 respectively) are present in the sequence shown in Figure 1A of the Cho et al. publication. Applicant respectfully submits that the results presented in Cho et al. confirm the human origin of the sequences in Figure 1 and found in the sequence listing (SEQ ID NO: 1 and 2) of the present application.

The term "gene" found in former claims 1 and 2 has been replaced with the expression "nucleotide sequence". In addition the term "gene", when relating to the nucleotide sequence encoding a protein having the amino acid sequence set forth in SEQ ID NO: 2, found in former claim 6, has been replaced with the expression "nucleotide sequence".

Claim 6 has been rejected under 35 U.S.C. § 112 first paragraph. Applicant respectfully submits that the expression of the nucleotide sequence of claim 1 leads to an increase in the transcription of genes. Claim 6 has thus been amended for purposes of clarity. Such amendment is supported by the specification as filed on page 7, lines 12 to 17 and in the paragraph bridging pages 7 and 8, where a fusion protein comprising a RTB1 moiety has been used to increase the transcription of a gene (e.g. a reporter gene such as the β -galactosidase gene or luciferase gene). Applicant also submits that, a person skilled in the art, at the time of filing and in light of the teaching of the present description, would have contemplated using a nucleotide sequence encoding a protein having the amino acid sequence set forth in SEQ ID NO: 2 to increase the transcription of various genes.

Claim 5 has been cancelled, thereby rendering the rejection moot.

Applicant thus respectfully submits that the claims, as they presently read, comply with 35 U.S.C. § 112 first paragraph. Reconsideration and withdrawal of the rejection are respectfully requested.

Rejection of Claims 1-7 Under 35 U.S.C. 112, Second Paragraph

The term "gene" found in former claims 1 and 2 has been replaced with the expression "nucleotide sequence". In addition the term "gene", when relating to the nucleotide sequence encoding a protein having the amino acid sequence set forth in SEQ ID NO: 2, found in former claim 6, has been replaced with the expression "nucleotide sequence". Applicant respectfully submits that these amended claims are clear.

Claims 2 and 4 have been amended to specify the human origin of the nucleotide sequence and the protein of Figure 1. The sequence listing has also been amended to specify the human origin of the sequences disclosed therein. Applicant respectfully submits that these claims, as they presently read, are clear.

The term “use of a gene according to claim 1 as a promoter for overexpressing a gene in a suitable tissue” has been removed from claim 6. Applicant respectfully submits that this amended claim is clear.

The expression “essentially consisting” has been removed from claims 1 and 3. Applicant respectfully submits that these amended claims, as well as their depending claims, are clear.

Claim 5 has been cancelled, thereby rendering the rejection moot.

Claim 6 has been amended to recite the steps to complete the preamble. Applicant respectfully submits that amended claim 6 is clear.

Claim 7 has been cancelled, thereby rendering the rejection moot.

New claim 10 which specifies that the nucleotide sequence of claim 1 has the nucleotide sequence of SEQ ID NO: 1 has been added. This claim finds support in the application as filed, namely in Figure 1.

New claim 11 which specifies a method for treating neoplastic disorders has been added. This claim finds support in the application as filed, namely on page 5, lines 7 to 15 (e.g. inhibition of the RTB1 gene for the treatment of neoplastic disorders) and on page 7, lines 1 to 5 (e.g. demonstration of overexpression of the RTB1 gene in cancer cells). Applicant respectfully indicates that a person skilled in the art, in light of the teaching of the present application, would have contemplated the inhibition of the RTB1 gene for treating neoplastic disorders.

Applicant respectfully submits that the claims, in their present form, comply with 35 U.S.C. § 112 second paragraph. Reconsideration and withdrawal of the rejection are respectfully requested.


CONCLUSION

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

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